DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-026293
Date Inspected: 15-Sep-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Job Site

CWI Name:	See Below		**CWI Present:**	☑ Yes	☐ No
Inspected CWI report:	☐ Yes	☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No ☐ N/A
Electrode to specification:	☑ Yes	☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No ☐ N/A
Qualified Welders:	☑ Yes	☐ No ☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No ☐ N/A
Approved Drawings:	☑ Yes	☐ No ☐ N/A	**Approved WPS:**	☑ Yes	☐ No ☐ N/A
			Delayed / Cancelled:	☐ Yes	☑ No ☐ N/A

Bridge No: 34-0006
Component: SAS Tower & OBG

Summary of Items Observed:

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed on various weld joints and Complete Joint Penetration (CJP) welds as noted below:

A). Tower Shear Plates

This QAI also observed the ongoing repair welding and grinding by various ABF personnel at the joint locations "N", "W", "D" and "A" on the B-face of the joints. The monitoring of the work and the inspection was performed by QC inspector, Bernie Docena. The repair welding was performed to correct the following types of discontinuities discovered and marked by QC during a visual inspection; overlap, the removal of slag trapped at the toes of the weld and the weld profiles.

The welding was performed by Jeremy Dolman ID-5042 utilizing the Shielded Metal Arc Welding (SMAW) process as per the Welding Procedure Specification (WPS) ABF-WPS-D15-1000 Repair Rev. 2. The welding parameters were observed and verified by this QAI and were noted as 112 amps. Also the minimum preheat temperature of 80 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius appeared to comply with the contract specifications.

B). Issues

Later in the shift this QAI observed the welder Richard Garcia ID-5892 preparing the heat induction blankets on

the "A" face of the shear plate joint "S" identified as WN: S-041. This QAI contacted the QC inspector, John Pagliero, and asked the if they would commence the repair welding of this excavation. Mr. Pagliero's response was that the QC department was directed by ABF Welding Quality Control Manager (WQCM) Jim Bowers to continue the work on this excavation which was rejected by visual inspection. At this time this QAI informed the QC inspector that an incident report (TL-15) would be generated for not complying with the contract specifications. For additional information see the incident report generated on this date.

Mr. Garcia commence the repair welding utilizing the Shielded Metal Arc Welding (SMAW) process as per the WPS identified as ABF-WPS-D15-1000 Repair, Rev. 2. The welding was monitored and the parameters were measured by the QC inspector and were observed and noted by the QAI as 135 amps. Also the minmum preheat temperature of 204 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius appeared to comply. The welding was not completed on this date. Note: The contractor has elected to elevate the minimum preheat temperature of 80 degrees Celsius to 204 degrees Celsius.

C). Document Control Review

This QA Inspector continued the daily review of field inspection reports and update of the field document control tracking records regarding the Orthotropic Box Girders (OBG, Longitudinal and Transverse "A" Deck Stiffeners, Deck Access Holes and the Tower Shear plates. The QAI also updated the tracking records for the pipe welds and the pipe supports.

On this date the QAI continued the review of the tracking documents for the OBG's identified as W1, W2, W3 and W4.

QA Summary

The welding was performed in the vertical position utilizing the E7018-H4R consumable. The 3.2 mm H4R electrodes were stored in a electrically heated, thermostatically controlled oven after the removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempil Heat Indicators for verifying the preheat and interpass temperatures. At the time of the observation one (1) issue was noted by the QAI.

The digital photographs on page 3 of this report illustrate some of the work observed during this scheduled work date.

WELDING INSPECTION REPORT

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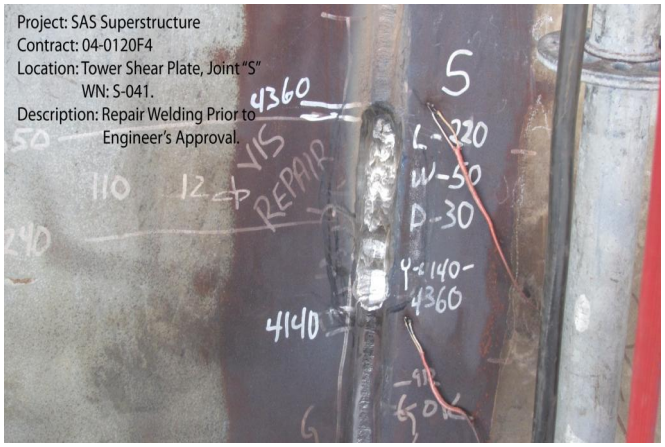

Summary of Conversations:

There were general conversations with Quality Control Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection and N.D.E. testing personnel scheduled for this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer